

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for operating ~~[[a]]~~ an integrated device within an operating range comprising:

enabling a reduced power operating mode in response to a ~~predetermined~~ thermal condition for the integrated device;

changing the integrated device's voltage from a first voltage to a second voltage upon activation of the reduced power operating mode; and

operating the integrated device at a frequency within the operating range based at least in part on a desired amount of power reduction.

Claim 2 (currently amended): The method of claim 1 wherein the first voltage is a nominal operating voltage and the second voltage is a reduced voltage that is defined during ~~manufacturing~~ manufacture of the integrated device.

Claim 3 (cancel)

Claim 4 (original): The method of claim 2 wherein the second voltage is stored into a plurality of fuses.

Claim 5 (currently amended): The method of claim 1 wherein ~~the a~~ a bus ratio utilized in the reduced power ~~reduction~~ operating mode is less than a maximum bus ratio for the integrated device and is calculated based on ~~subtracting~~ subtraction of an offset from the maximum bus ratio, the offset is based at least in part on the supported bus frequency of the integrated device.

Claim 6 (original): The method of claim 1 wherein the integrated device is a processor.

Claims 7 – 23 (cancel)

Claim 24 (new): An apparatus comprising:

a thermal monitor to be enabled if a temperature of an integrated circuit meets or exceeds a threshold value;

a multiplexer to receive a plurality of offset values and a bus frequency that is supported by the integrated circuit and to forward one of the offset values based at least in part on the bus frequency; and

a logic unit to determine a thermal event bus ratio based on a difference between an initial bus ratio and the selected offset value, determine if the thermal event bus ratio is at least equal to a minimum bus ratio, and to change a voltage and frequency of the integrated circuit if the temperature meets or exceeds the threshold value.

Claim 25 (new): The apparatus of claim 24, wherein the thermal monitor is to be disabled if the thermal event bus ratio is below the minimum bus ratio.

Claim 26 (new): The apparatus of claim 25, wherein the integrated circuit comprises a processor.

Claim 27 (new): The apparatus of claim 24, wherein the changed voltage corresponds to a lowest voltage capable of operation of the integrated circuit in response to a thermal issue.

Claim 28 (new): The apparatus of claim 27, wherein a value of the changed voltage is stored in a fuse of the integrated circuit.

Claim 29 (new): The apparatus of claim 27, wherein the changed frequency in response to the thermal issue is within an operating range between the minimum bus ratio and a maximum thermal event bus ratio available at the lowest voltage.

Claim 30 (new): A system comprising:
a processor including a thermal monitor to be enabled if a temperature of the processor is at least at a threshold value, a multiplexer to receive a plurality of offset values and a bus frequency that is supported by the processor and to forward one of the offset values based at least in part on the bus frequency, and a logic unit to determine a thermal event bus ratio based on a difference between an initial bus ratio and the selected offset value, determine if the thermal event bus ratio is at least equal to a minimum bus ratio, and to change a voltage and frequency of the processor if the temperature is at least the threshold value; and
a memory coupled to the processor via a chipset.

Claim 31 (new): The system of claim 30, wherein the thermal monitor is to be disabled if the thermal event bus ratio is below the minimum bus ratio.

Claim 32 (new): The system of claim 31, wherein the changed voltage corresponds to a lowest voltage capable of operation of the processor in response to a thermal issue.

Claim 33 (new): The system of claim 32, wherein a value of the changed voltage is stored in a fuse of the processor.

Claim 34 (new): The system of claim 33, wherein the changed frequency in response to the thermal issue is within an operating range between the minimum bus ratio and a maximum thermal event bus ratio available at the lowest voltage.